

Driving Safety and VMT per Capita in the United States 1950-2012

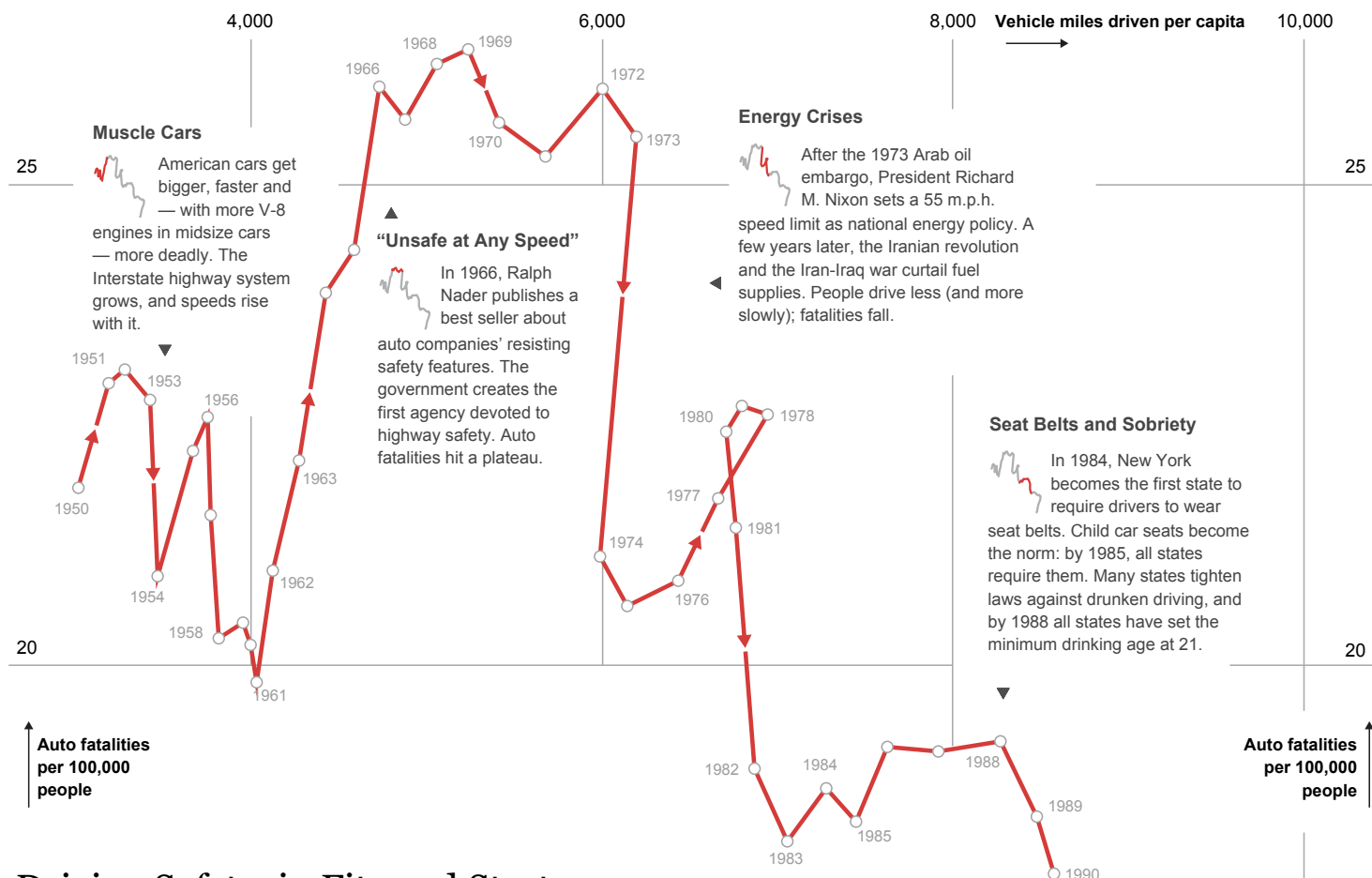
M Metropolitan Transportation Commission

Planning, Financing and Coordinating
Transportation for the nine-county
San Francisco Bay Area

Legislation and Public Affairs Section

Map of the Month: October 2012

Graphics Department



Driving Safety, in Fits and Starts

Americans drive a staggering number of miles — close to three trillion every year, according to the government. (That is half a light-year, or 120 million trips around the world.) And although traffic accidents remain a major public safety problem, the biggest killer of people ages 5 to 34, vehicle travel is far safer than it was a few decades ago. Several factors appear to account for the sharp decline in fatalities. Technology (like anti-lock brakes and air bags) and road behavior (like wearing seat belts and driving sober) have both improved greatly since 1950. Americans almost always drive more each year than the previous one — at least until recently, when the recession curtailed road habits. And the auto fatality rate has been decreasing since the 1960s, when cars with massive engines carried their unbuckled passengers on primarily two-lane roads.

The safety data is usually charted as deaths per miles traveled. But what happens when the metrics are teased apart, and familiar data is charted in an unfamiliar way?

Plotting the two most important variables against each other — miles traveled versus deaths per 100,000 population — yields a pattern that looks like a plateau followed by a steep drop. It evokes the theory of punctuated equilibrium, proposed by the paleontologists Stephen Jay Gould and Niles Eldredge, which suggests that instead of continuous gradual evolution, change occurs abruptly after periods of virtual standstill. “You see fatalities drop after a breakthrough in new technologies or behaviors, and then plateau until the next one,” said David L. Strickland, administrator of the National Highway Traffic Safety Administration. “It takes time for new safety technologies to work their way into the whole fleet of cars on the road.”

